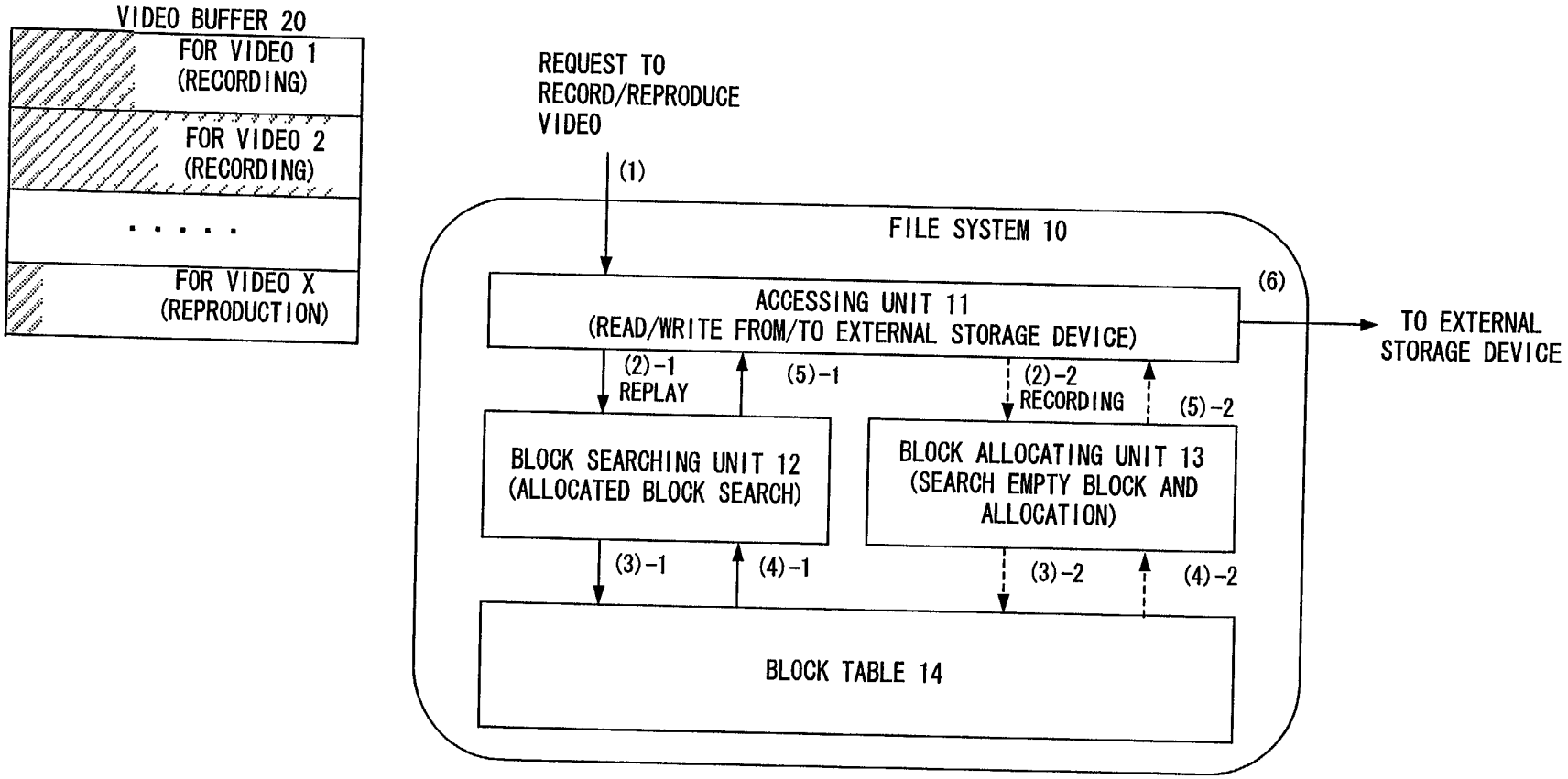


FIG. 1

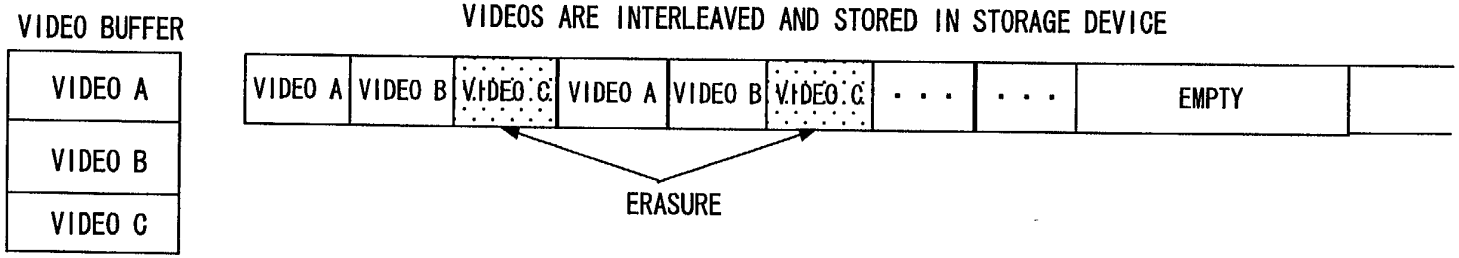


FIG. 2A

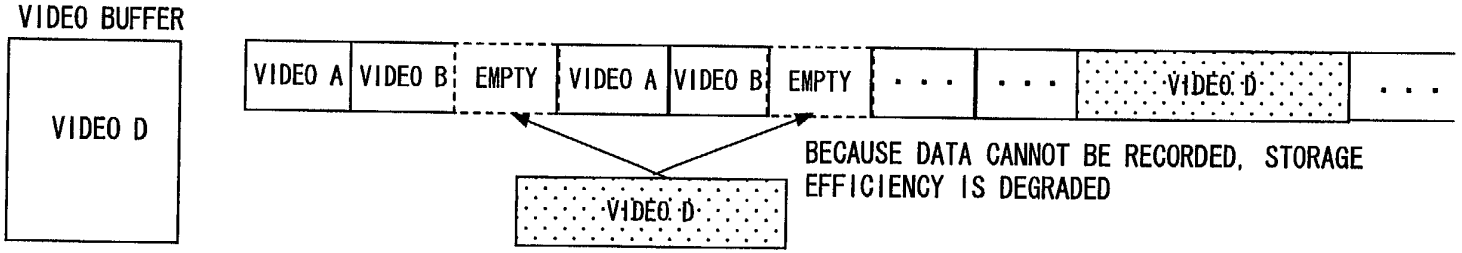


FIG. 2B

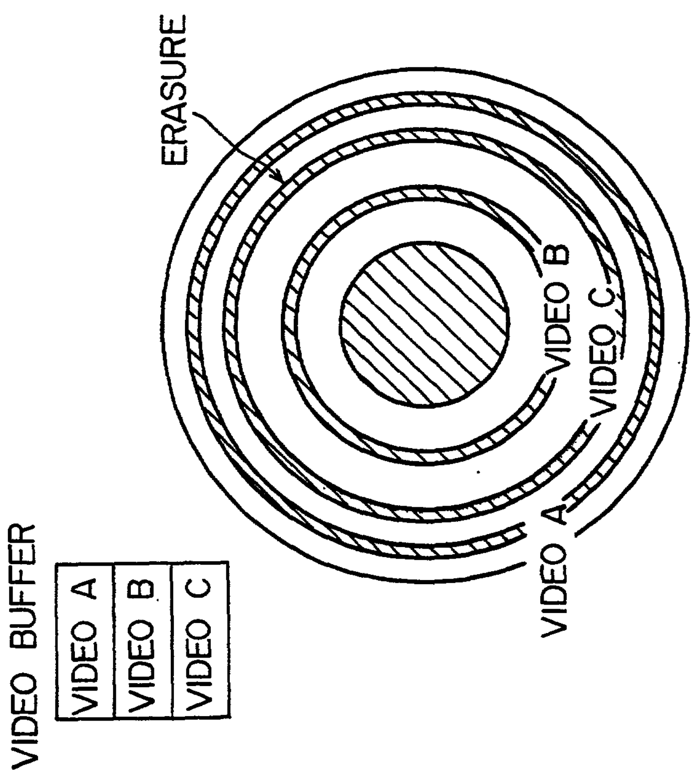

VIDEO BUFFER
VIDEO A
VIDEO B
VIDEO C
ERASURE
VIDEO A
VIDEO B
VIDEO C

FIG. 3A

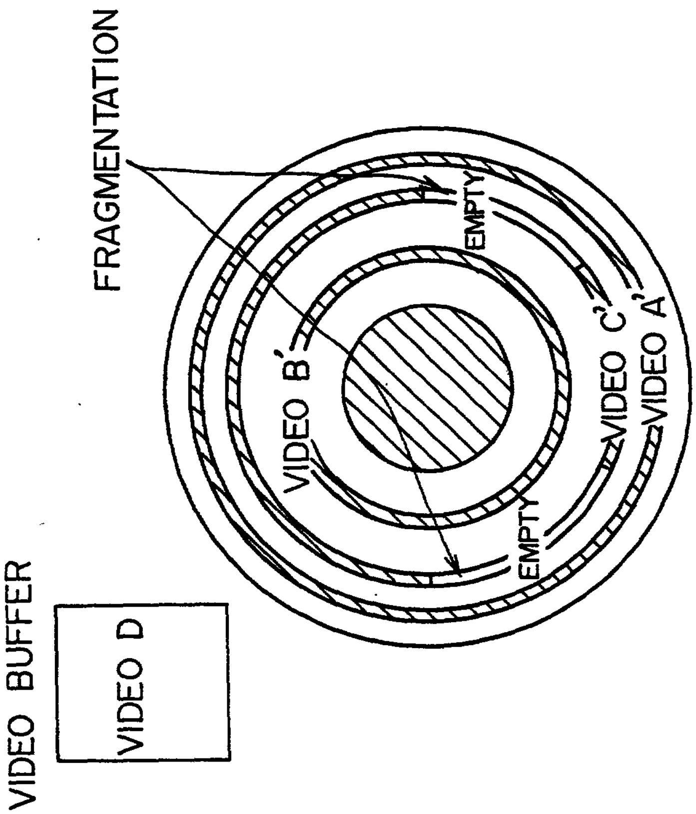
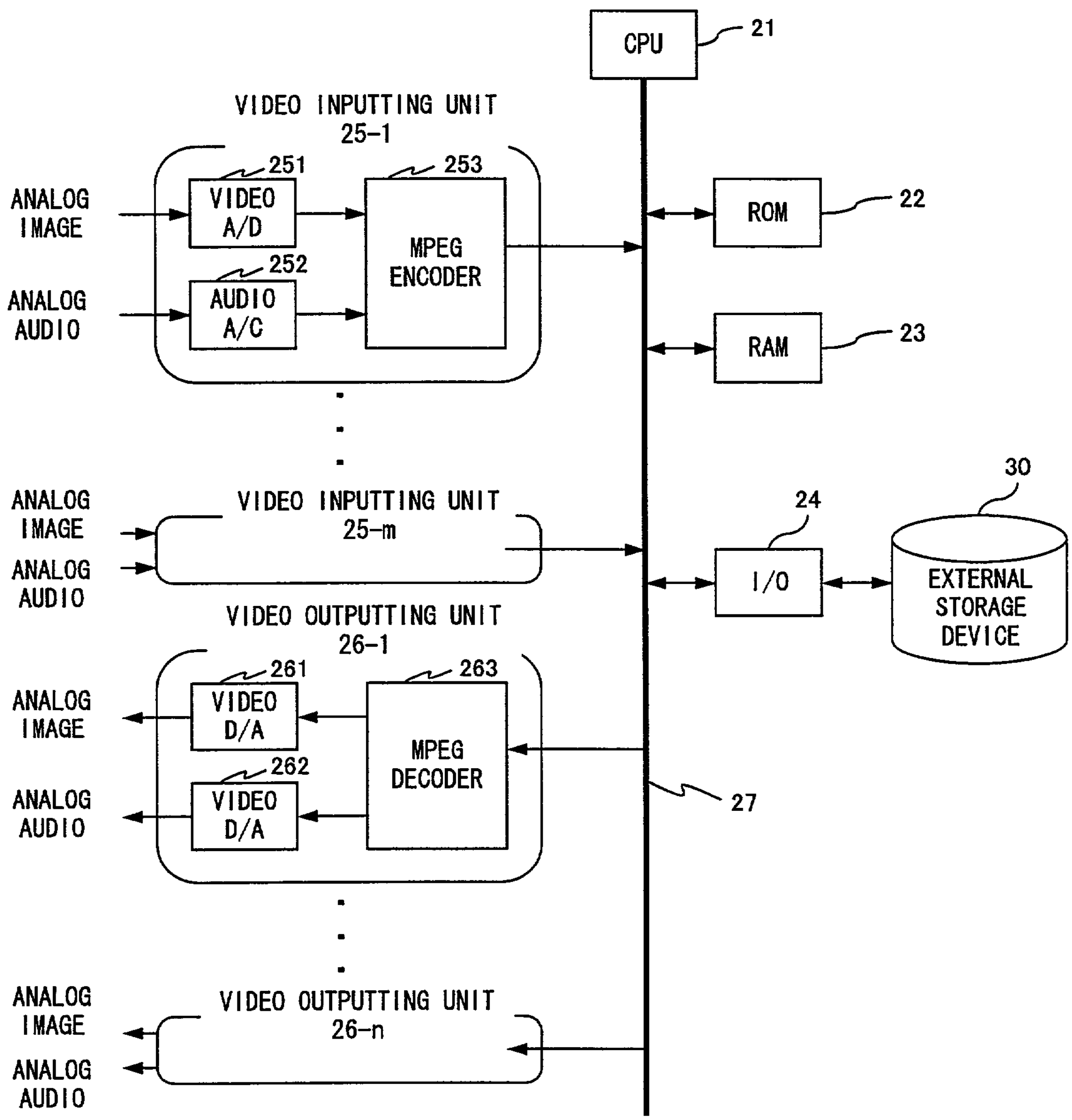

VIDEO BUFFER
VIDEO D
FRAGMENTATION
EMPTY
EMPTY
VIDEO B'
VIDEO C'
VIDEO A'

FIG. 3B



F I G. 4

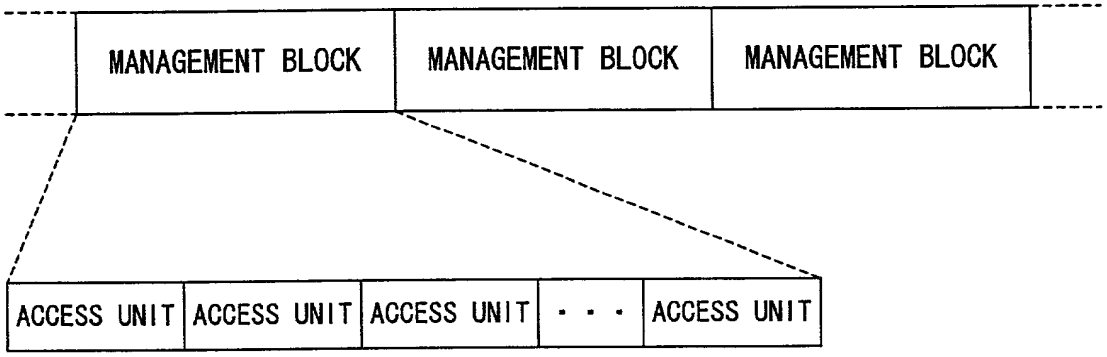


FIG. 5

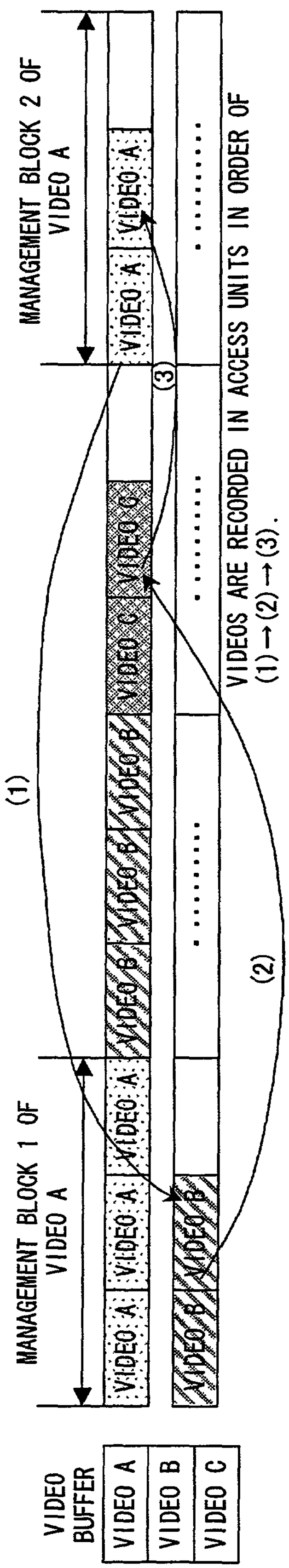

MANAGEMENT BLOCK 1 OF VIDEO A
MANAGEMENT BLOCK 2 OF VIDEO A
VIDEO BUFFER
VIDEO A
VIDEO B
VIDEO C
(1)
(2)
(3)
VIDEOS ARE RECORDED IN ACCESS UNITS IN ORDER OF (1)→(2)→(3).

FIG. 6A

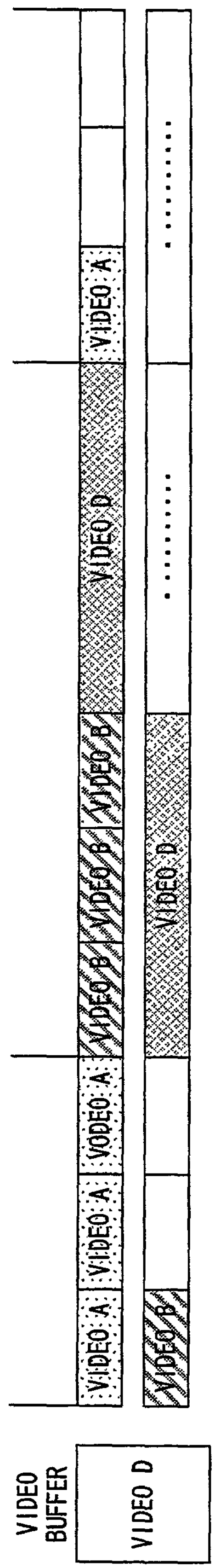

VIDEO BUFFER
VIDEO D
VIDEO A
VIDEO B

FIG. 6B

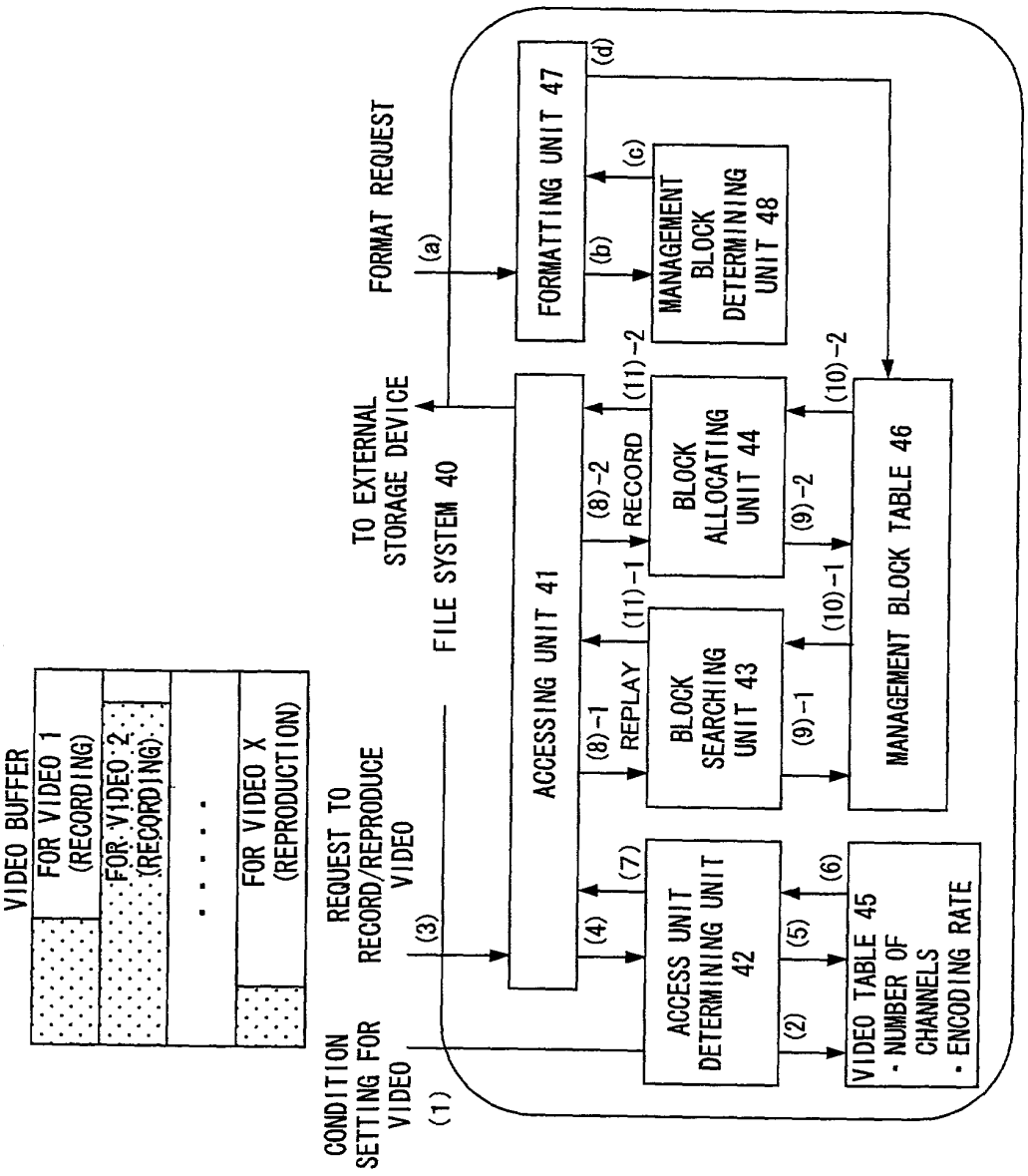

VIDEO BUFFER
FOR VIDEO 1 (RECORDING)
FOR VIDEO 2 (RECORDING)
FOR VIDEO X (REPRODUCTION)
CONDITION SETTING FOR VIDEO
(1)
REQUEST TO RECORD/REPRODUCE VIDEO
(3)
FILE SYSTEM 40
TO EXTERNAL STORAGE DEVICE
FORMAT REQUEST
(a)
ACCESSING UNIT 41
ACCESS UNIT DETERMINING UNIT 42
BLOCK SEARCHING UNIT 43
BLOCK ALLOCATING UNIT 44
FORMATTING UNIT 47
MANAGEMENT BLOCK DETERMINING UNIT 48
MANAGEMENT BLOCK TABLE 46
VIDEO TABLE 45
• NUMBER OF CHANNELS
• ENCODING RATE
(2)
(4)
(5)
(6)
(7)
(8)-1 REPLAY
(8)-2 RECORD
(9)-1
(9)-2
(10)-1
(10)-2
(11)-1
(11)-2
(b)
(c)
(d)

FIG. 7

VIDEO TABLE

VIDEO TO BE RECORDED	ENCODING RATE	VIDEO IDENTIFIER
VIDEO A	8Mbps	1
VIDEO B	8Mbps	2
VIDEO C	8Mbps	3
...	...	...
VIDEO D	8Mbps	10

ACCESS UNIT IS SET BY ACCESS UNIT DETERMINING UNIT FOR EACH VIDEO

→

VIDEO IDENTIFIER	ACCESS UNIT
1	256KB
2	256KB
3	256KB
...	...
10	256KB

FIG. 8

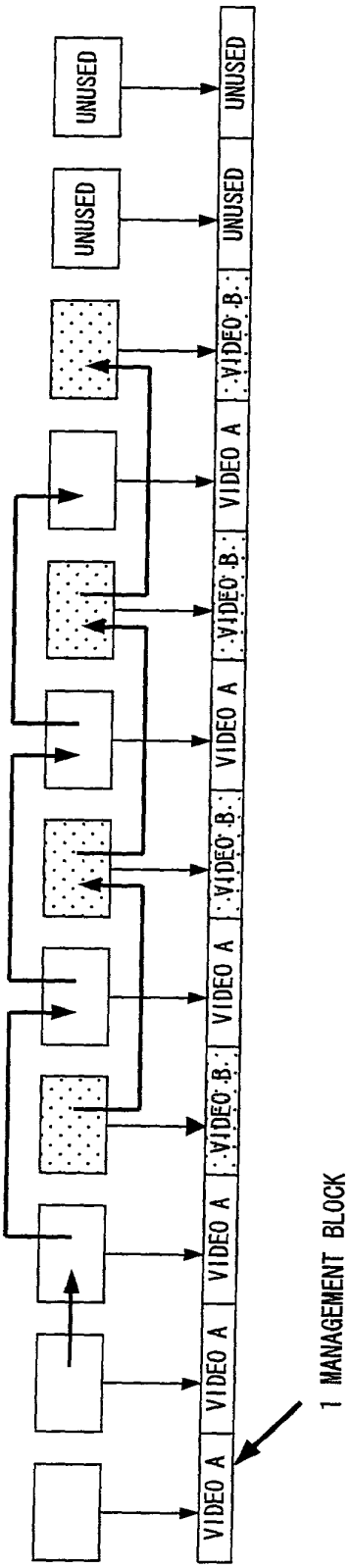

UNUSED
UNUSED
UNUSED
VIDEO A
VIDEO B
VIDEO A
VIDEO B
VIDEO A
VIDEO B
VIDEO A
VIDEO B
VIDEO A
VIDEO A
1 MANAGEMENT BLOCK

FIG. 9

STRUCTURE OF MANAGEMENT BLOCK TABLE MEMBER

VIDEO IDENTIFIER	START ADDRESS	END ADDRESS	POINTER TO NEXT MANAGEMENT BLOCK TABLE MEMBER

FIG. 10

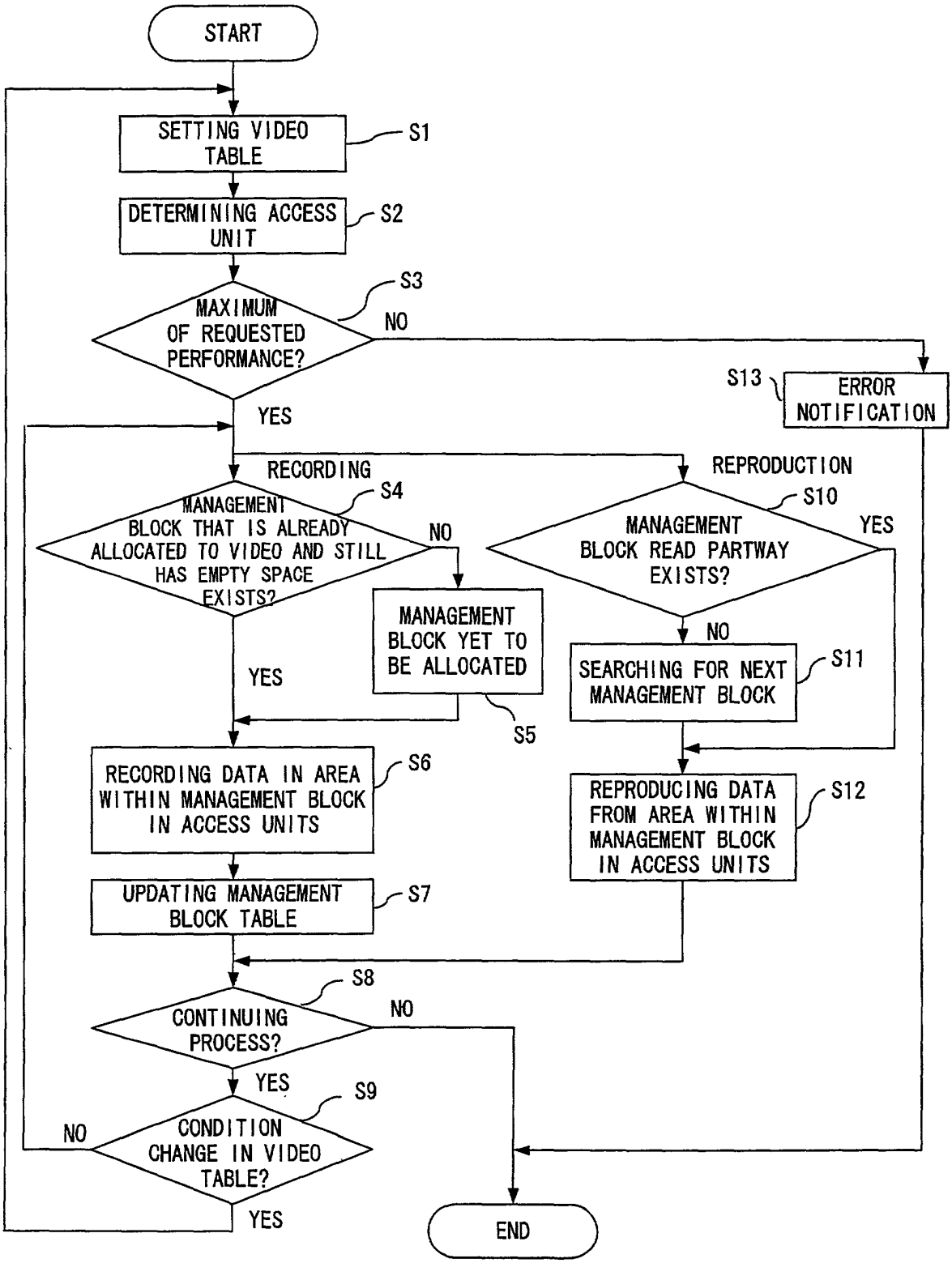

START
SETTING VIDEO TABLE
S1
DETERMINING ACCESS UNIT
S2
MAXIMUM OF REQUESTED PERFORMANCE?
S3
NO
YES
S13
ERROR NOTIFICATION
RECORDING
REPRODUCTION
MANAGEMENT BLOCK THAT IS ALREADY ALLOCATED TO VIDEO AND STILL HAS EMPTY SPACE EXISTS?
S4
NO
YES
MANAGEMENT BLOCK YET TO BE ALLOCATED
S5
MANAGEMENT BLOCK READ PARTWAY EXISTS?
S10
YES
NO
SEARCHING FOR NEXT MANAGEMENT BLOCK
S11
RECORDING DATA IN AREA WITHIN MANAGEMENT BLOCK IN ACCESS UNITS
S6
REPRODUCING DATA FROM AREA WITHIN MANAGEMENT BLOCK IN ACCESS UNITS
S12
UPDATING MANAGEMENT BLOCK TABLE
S7
CONTINUING PROCESS?
S8
NO
YES
CONDITION CHANGE IN VIDEO TABLE?
S9
NO
YES
END

FIG. 11

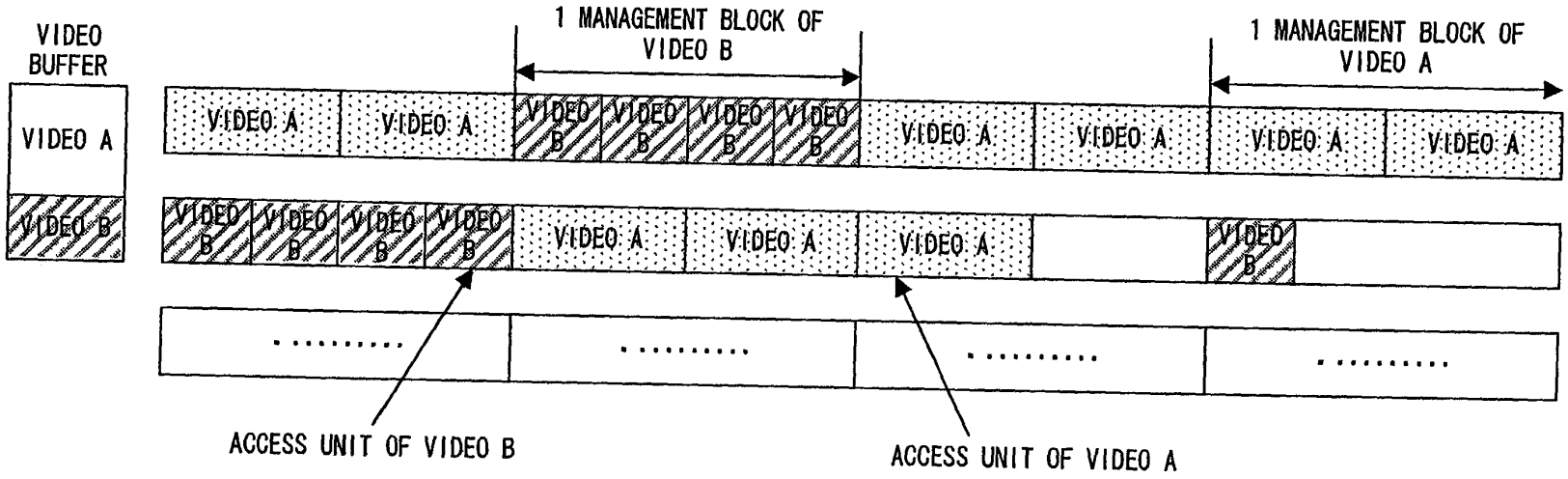


FIG. 12

VIDEO TABLE

VIDEO TO BE RECORDED	PROCESSING TYPE	ENCODING RATE	VIDEO IDENTIFIER
VIDEO A	RECORDING	8Mbps	1
VIDEO B	RECORDING	8Mbps	2
VIDEO C	RECORDING	24Mbps	3
...	. . .	...	. . .
VIDEO D	REPRODUC-TION	24Mbps	10

SETTING ACCESS UNIT →

VIDEO IDENTIFIER	ACCESSS UNIT
1	265KB
2	265KB
3	768KB
...	...
10	768KB

FIG. 13

VIDEO TABLE

VIDEO	PROCESSING TYPE	ENCODING RATE	VIDEO IDENTIFIER
A	RECORDING	8Mbps	1
B	RECORDING	8Mbps	2
C	RECORDING	24Mbps	3
...	...	...	...
D	REPRODUCTION	24Mbps	10

61

VIDEO ERASURE (VIDEO B) AND ADDITION (VIDEO E)

VIDEO TABLE

62

	PROCESSING TYPE	ENCODING RATE	VIDEO IDENTIFIER
A	RECORDING	8Mbps	1
C	RECORDING	24Mbps	3
...	...	...	...
D	REPRODUCTION	24Mbps	10
E	RECORDING	4Mbps	11

VIDEO CONDITION CHANGE (VIDEO B)

VIDEO TABLE

63

VIDEO	PROCESSING TYPE	ENCODING RATE	VIDEO IDENTIFIER
A	RECORDING	8Mbps	1
B	RECORDING	24Mbps	2
C	RECORDING	24Mbpd	3
...	...	...	...
D	REPRODUCTION	24Mbps	10

FIG. 14

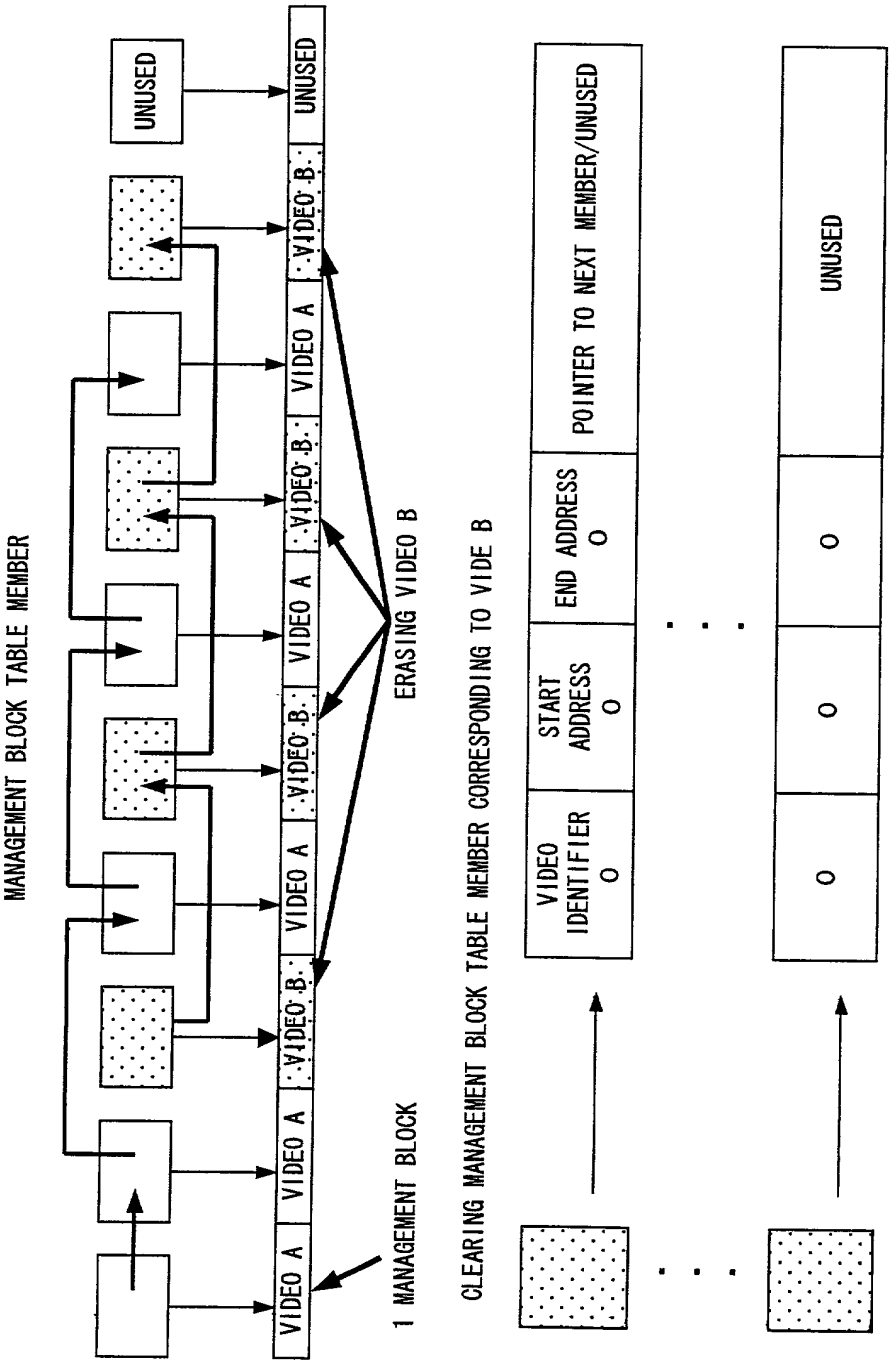

MANAGEMENT BLOCK TABLE MEMBER
UNUSED
VIDEO A
VIDEO B
1 MANAGEMENT BLOCK
ERASING VIDEO B
CLEARING MANAGEMENT BLOCK TABLE MEMBER CORRESPONDING TO VIDE B
VIDEO IDENTIFIER
START ADDRESS
END ADDRESS
POINTER TO NEXT MEMBER/UNUSED
0
UNUSED

FIG. 15

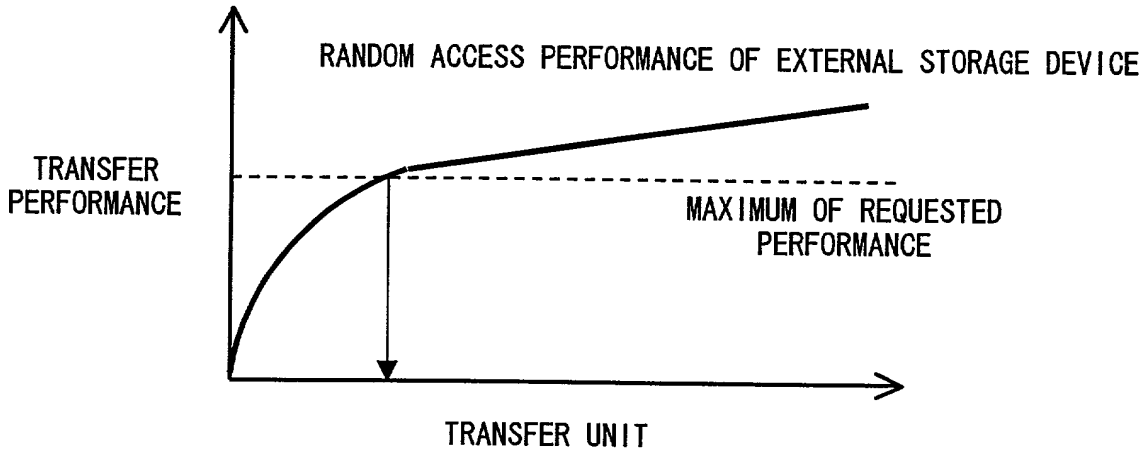


FIG. 16

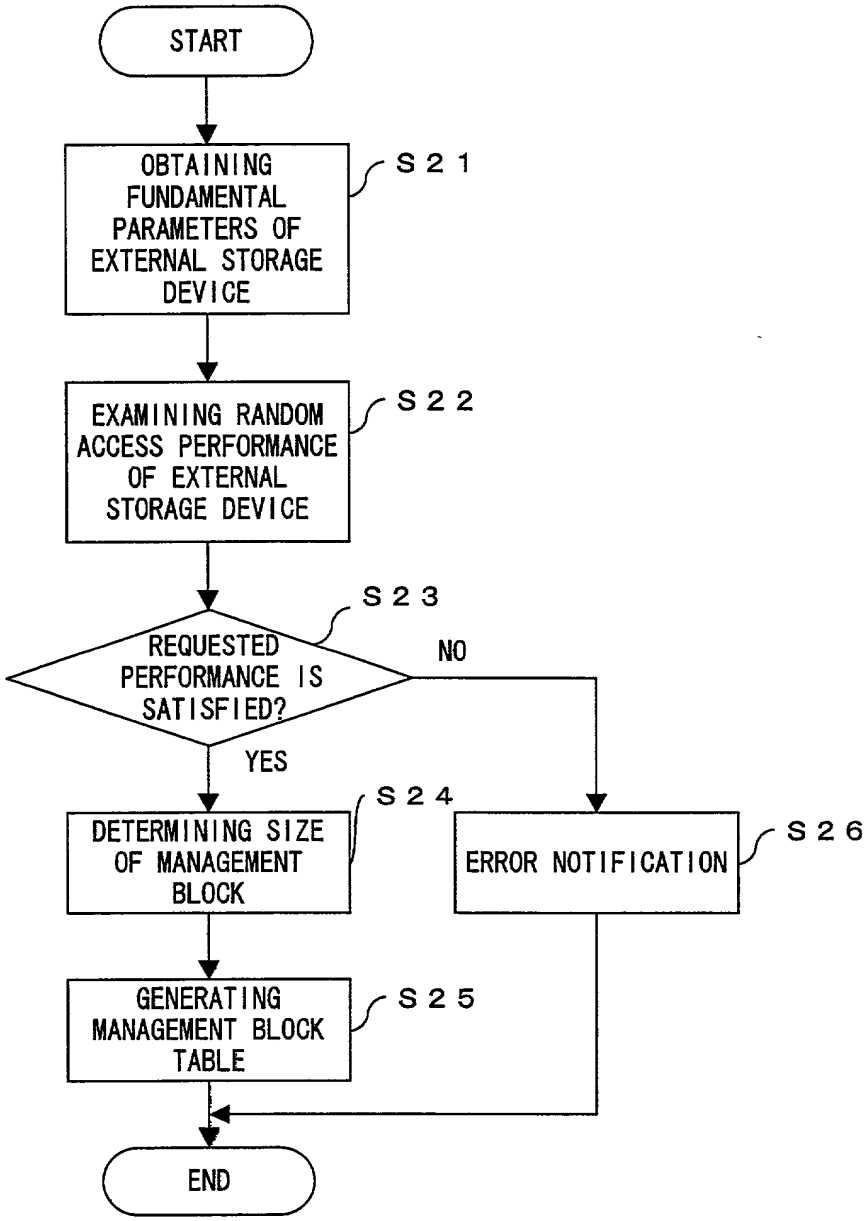


FIG. 17

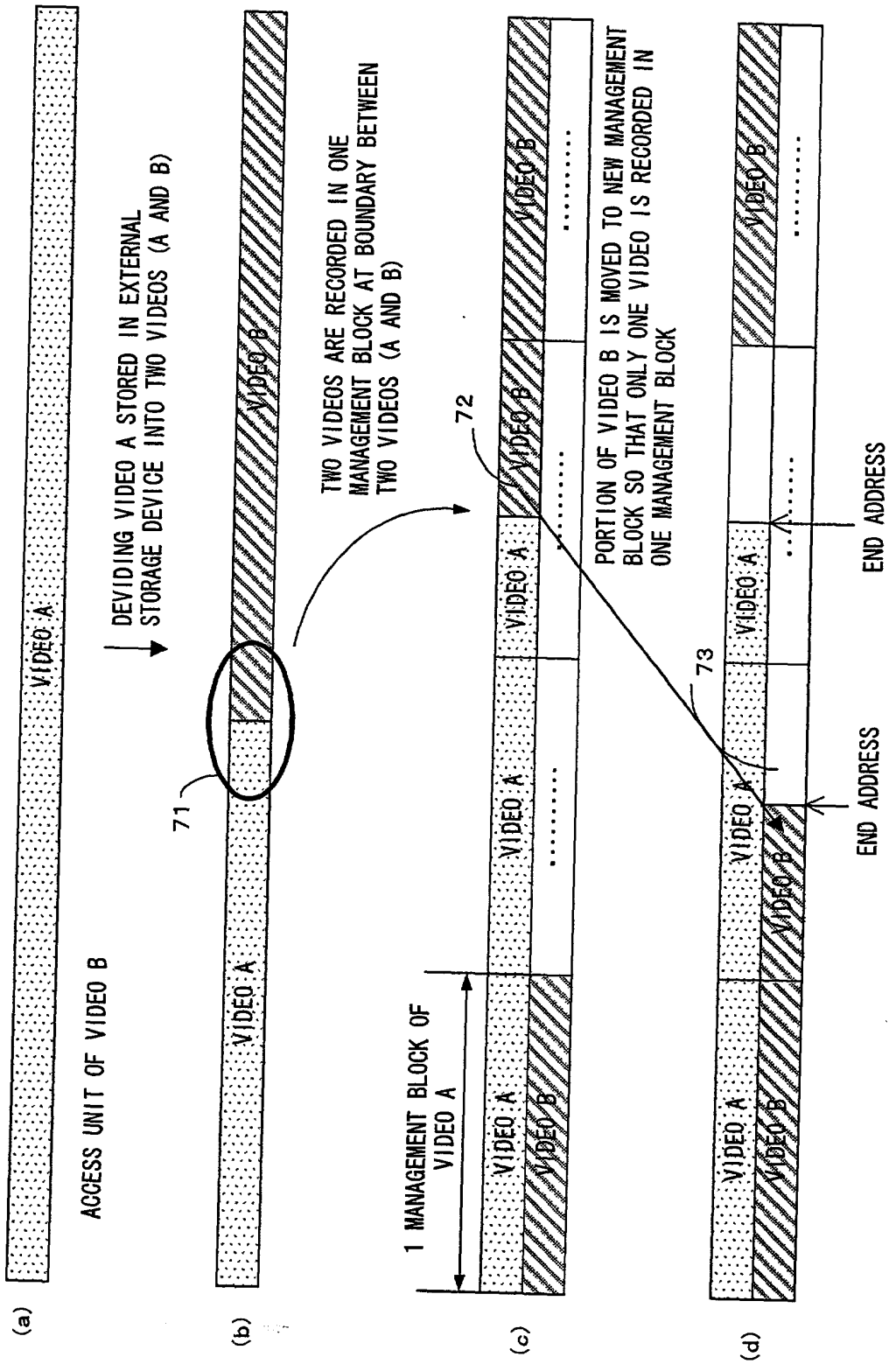


FIG. 18

FIG. 19A

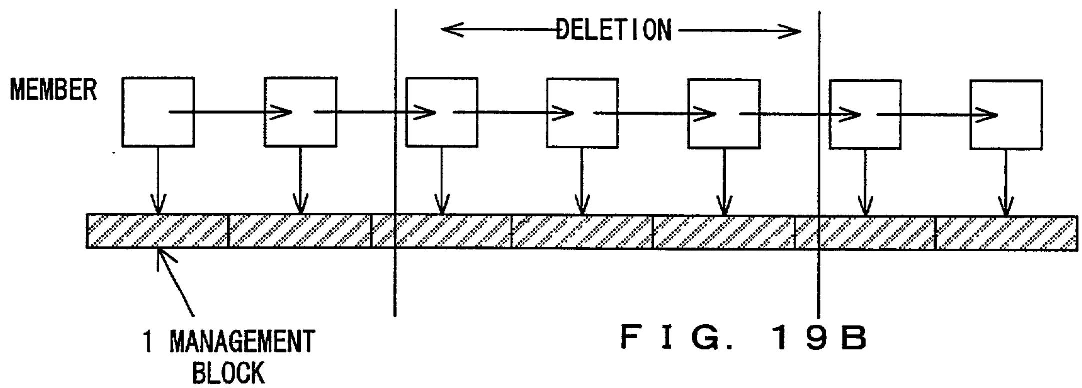


FIG. 19B

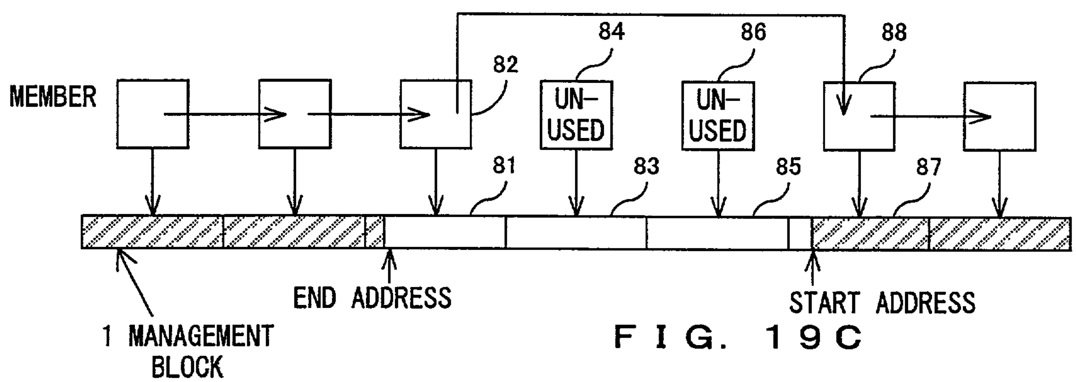


FIG. 19C

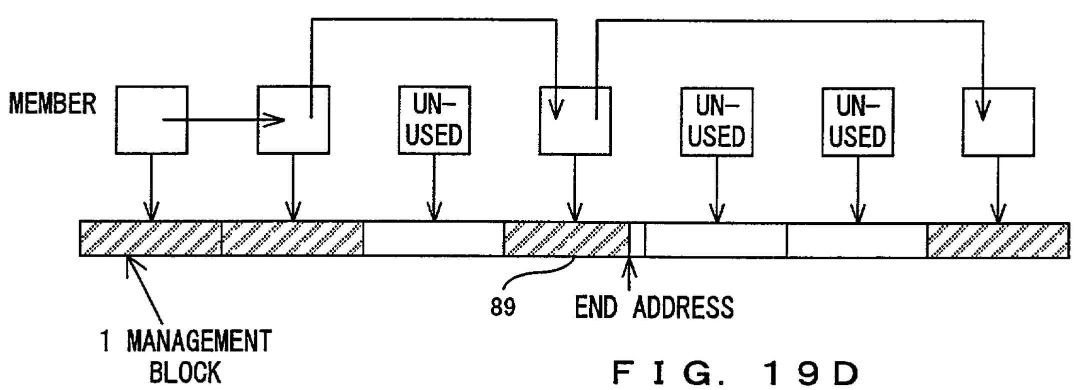
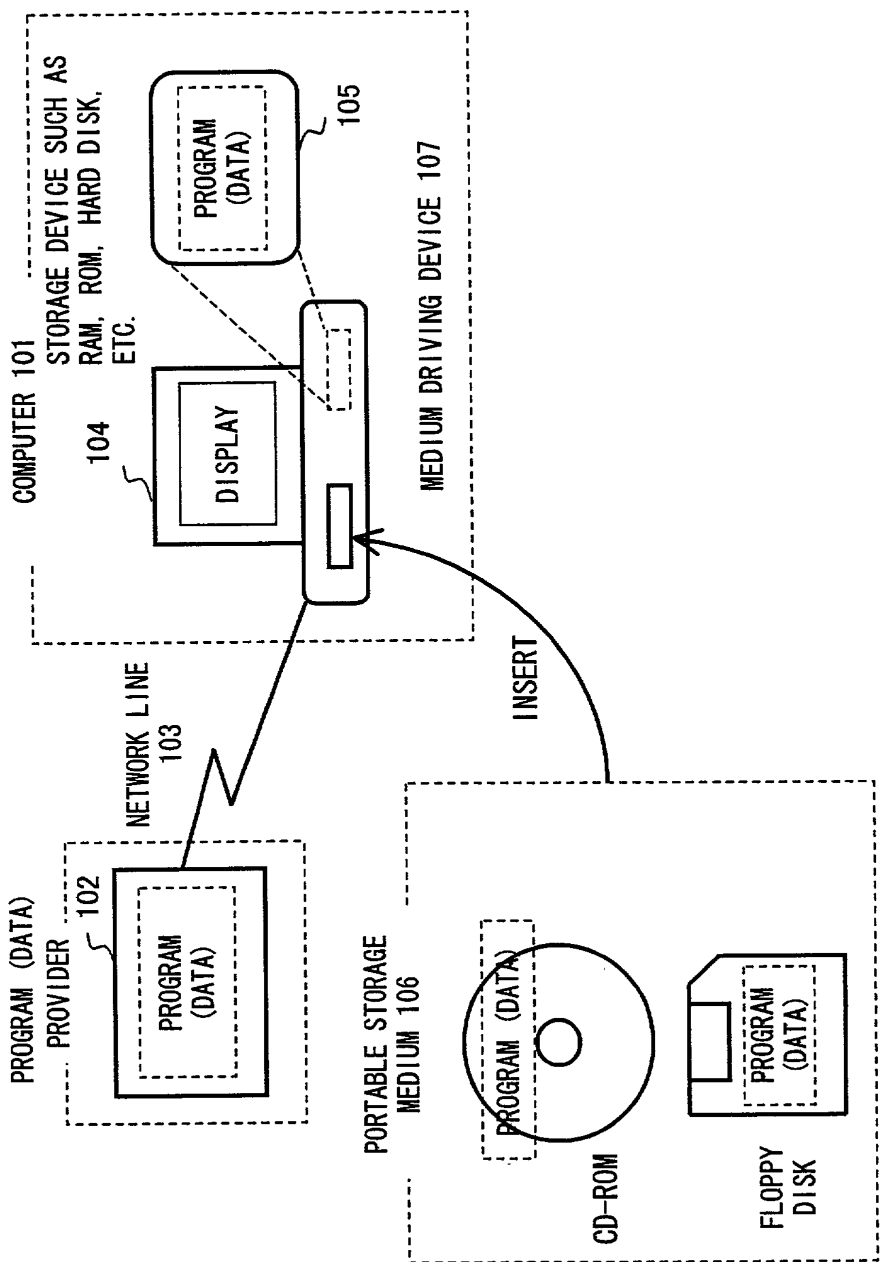


FIG. 19D


COMPUTER 101
STORAGE DEVICE SUCH AS RAM, ROM, HARD DISK, ETC.
104
DISPLAY
PROGRAM (DATA)
105
MEDIUM DRIVING DEVICE 107
NETWORK LINE 103
INSERT
PROGRAM (DATA) PROVIDER
102
PROGRAM (DATA)
PORTABLE STORAGE MEDIUM 106
PROGRAM (DATA)
CD-ROM
PROGRAM (DATA)
FLOPPY DISK

F I G. 2 0